

***Anaverticladus uncinatus* gen. & sp. nov. from decaying leaves from Brazil**

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ABSTRACT—*Anaverticladus uncinatus*, collected from decaying leaves in Brazil, is described and illustrated as a new genus and species. It is distinguished by conidiophores that are differentiated, unbranched, erect or prostrate, septate, and pale brown, conidiogenous cells that are monoblastic, terminal, curved to uncinata near the conidiogenous locus, and cylindrical or subulate, and conidia that are solitary cylindrical-fusiform, uncinata, smooth at the base but coarsely verruculose elsewhere, 5–17-euseptate, and golden brown. Conidial secession is schizolytic.

KEY WORDS—rainforest, neotropic, taxonomy

Introduction

The diversity of conidial fungi in the Brazilian Atlantic Forest has received little attention (Flora do Brasil 2016). During a survey of hyphomycetes associated with decaying plant materials in Pernambuco State, a conspicuous fungus was collected that shows remarkable differences from all previously described genera (Seifert et al. 2011) and is described here as new.

Materials & methods

Samples of submerged litter were placed in plastic bags for transport to the laboratory, where they were treated according to Castañeda-Ruiz et al. (2016). Attempts

to obtain this species in pure culture were unsuccessful. Mounts were prepared in 90% lactic acid. Anatomical features were measured at a 1000× magnification under a Nikon Eclipse Ni-U microscope using bright field optics and photographed using DIC optics with a Nikon DS-Fi2 digital camera. The holotype was deposited in the Herbarium of Universidade Federal de Pernambuco, Recife, Brazil (URM).

Taxonomy

Anaverticladus P.M.O. Costa, Malosso & R.F. Castañeda, **gen. nov.**

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Differs from *Verticicladus* by its unbranched conidiophores, uncinatate or curved conidiogenous cells, and schizolytic conidial secession.

TYPE SPECIES: *Anaverticladus uncinatus* P.M.O. Costa et al.

ETYMOLOGY: Greek, *ana*-, meaning upwards; Latin *verticicladus* referring to the hyphomycete genus *Verticicladus*.

Asexual fungi. CONIDIOPHORES differentiated, erect or prostrate, unbranched, septate, pale brown. CONIDIOGENOUS CELLS monoblastic, curved to uncinatate, integrated, determinate. Conidial secession schizolytic. CONIDIA solitary, acrogenous, cylindrical-fusiform, euseptate, pale brown, subconical truncate at the base.

Anaverticladus uncinatus P.M.O. Costa, Malosso & R.F. Castañeda, **sp. nov.**

FIGS 1–2

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Differs from all *Verticicladus* spp. by its unbranched slender conidiophores, its uncinatate or slightly curved conidiogenous loci, and its euseptate conidia that secede schizolytically.

TYPE: Brazil, Pernambuco State: Bonito, Mata da Chuva, 8°30'S 35°42'W, on decaying leaves of unidentified plants, 3.III.2016, coll. P.O. Costa (**Holotype**: URM 89939).

ETYMOLOGY: Latin, *uncinatus*, meaning hook-shaped.

COLONIES on the natural substratum effuse, hairy, yellowish-brown. Mycelium mostly superficial, composed of septate, anastomosing or slightly branched, 2–3 µm diam., smooth, pale brown hyphae. CONIDIOPHORES differentiated, mononematous, unbranched, erect or prostrate, bent or flexuous, slender, pale brown or brown, subhyaline or very pale brown toward the apex, smooth, 0–3-septate, 40–70 × 3–4 µm. CONIDIOGENOUS CELLS monoblastic, integrated, terminal, determinate, subulate, curved to uncinatate near and just before the conidiogenous loci, 15–20 × 3 µm, pale brown. Conidial secession schizolytic. CONIDIA solitary, acrogenous, 5–17-euseptate, 45–140 × 5–9 µm, cylindrical-fusiform, uncinatate or curved at the conical-truncate, smooth-walled basal cell, 7–12 × 2–3 µm, remaining wall verruculose toward the attenuated, narrowly obtuse apex, golden brown, dry.

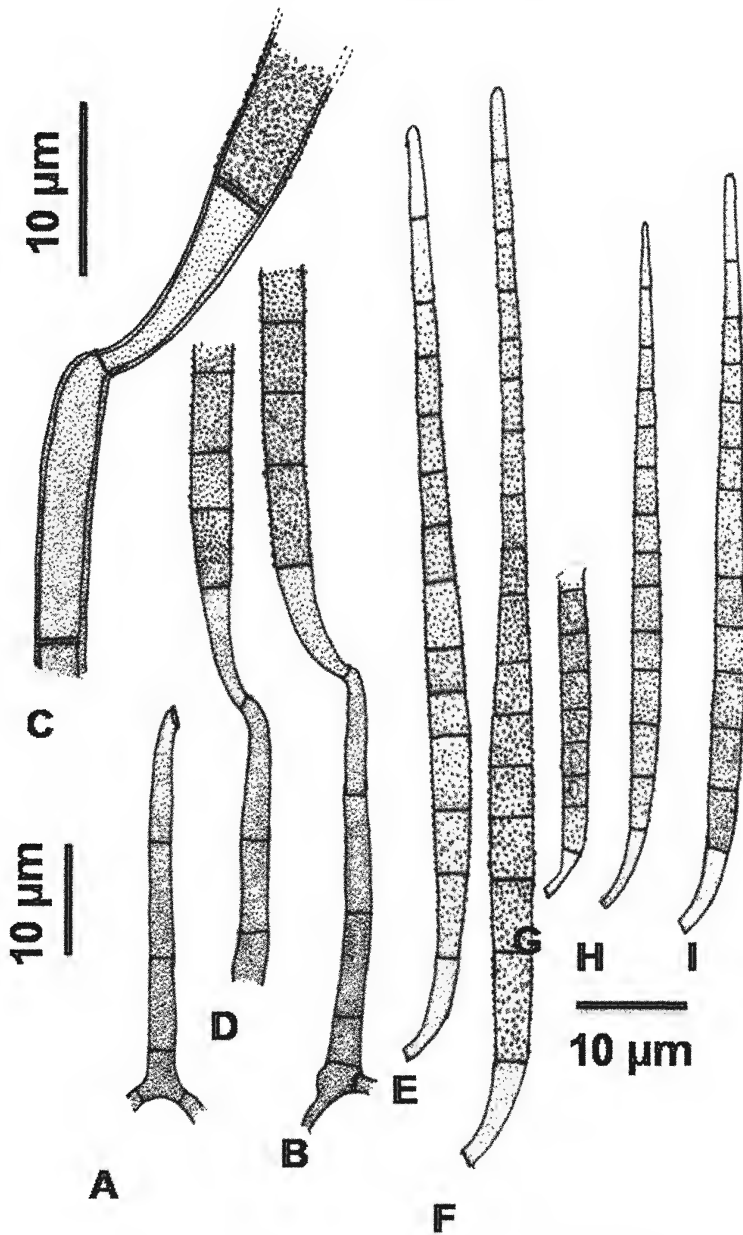


FIG. 1. *Anaverticladus uncinatus* (ex holotype, URM 89939).

A, B. Conidiophores, conidiogenous cells, and conidium.

C, D. Conidiogenous cells and conidia section. E–I. Conidia.

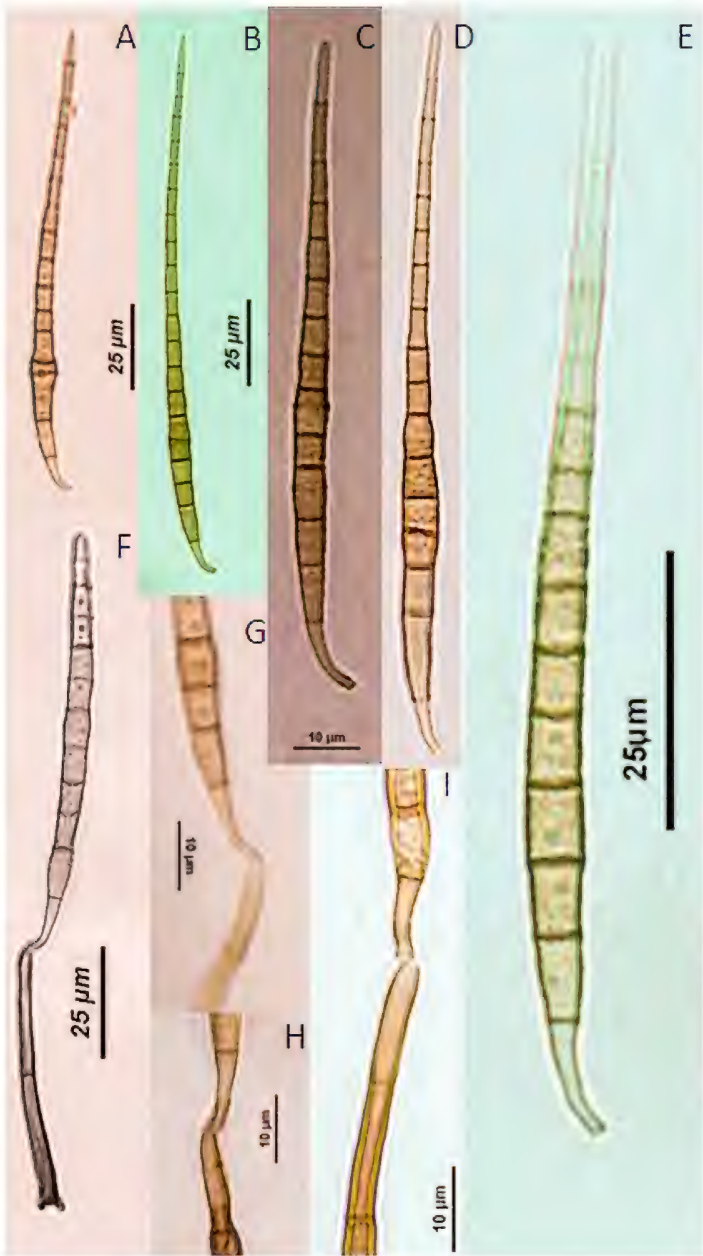


FIG. 2. *Anaverticicladus uncinatus* (ex holotype, URM 89939).
A–E. Conidia. F. Conidiophore, conidiogenous cells, and conidium.
G–I. Conidiogenous cells and conidia.

COMMENTS: *Anaverticicladius* is superficially similar to *Mycofalcella* Marvanová et al., *Paraarthrocladium* Matsush., and *Verticicladius* Matsush., all of which have short differentiated conidiophores and a blastic conidial ontogeny but lack uncinata or curved conidiogenous cells near or just before the conidiogenous loci (Seifert et al 2011). *Mycofalcella* is distinguished by reduced unbranched to sparingly branched conidiophores and hyaline scoleco- or phragmoconidia with a basal appendage (Marvanová et al. 1993). *Paraarthrocladium* has unbranched or branched conidiophores, the conidiogenous cells are integrated and determinate or indeterminate with sympodial extensions, and all structures including the conidia are hyaline; and *Verticicladius* is characterized by almost verticillate branched conidiogenous cells and rhexolytic conidial secession (Matsushima 1993).

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